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- (71) Applicant and
(72) Inventor: LIU, Jun [CN/CA]; Faculty of Medicine, University of Toronto, Dept. Medical Genetics and Microbiology, Medical Sciences Building, 1 King's College Circle, Rm. 4382, Toronto, Ontario M5S 1A8 (CA).
- (72) Inventors; and
(75) Inventors/Applicants (for US only): CHEN, Jeffrey [CA/CA]; Faculty of Medicine, University of Toronto, Dept. Medical Genetics and Microbiology, Medical Sciences Building, 1 King's College Circle, Rm. 4382,

Toronto, Ontario M5S 1A8 (CA). ALEXANDER, David [CA/CA]; Faculty of Medicine, University of Toronto, Dept. Medical Genetics and Microbiology, Medical Sciences Building, 1 King's College Circle, Rm. 4382, Toronto, Ontario M5S 1A8 (CA).

(74) Agent: DEETH WILLIAMS WALL LLP; National Bank Building, Suite 400, 150 York Street, Toronto, Ontario M5H 3S5 (CA).

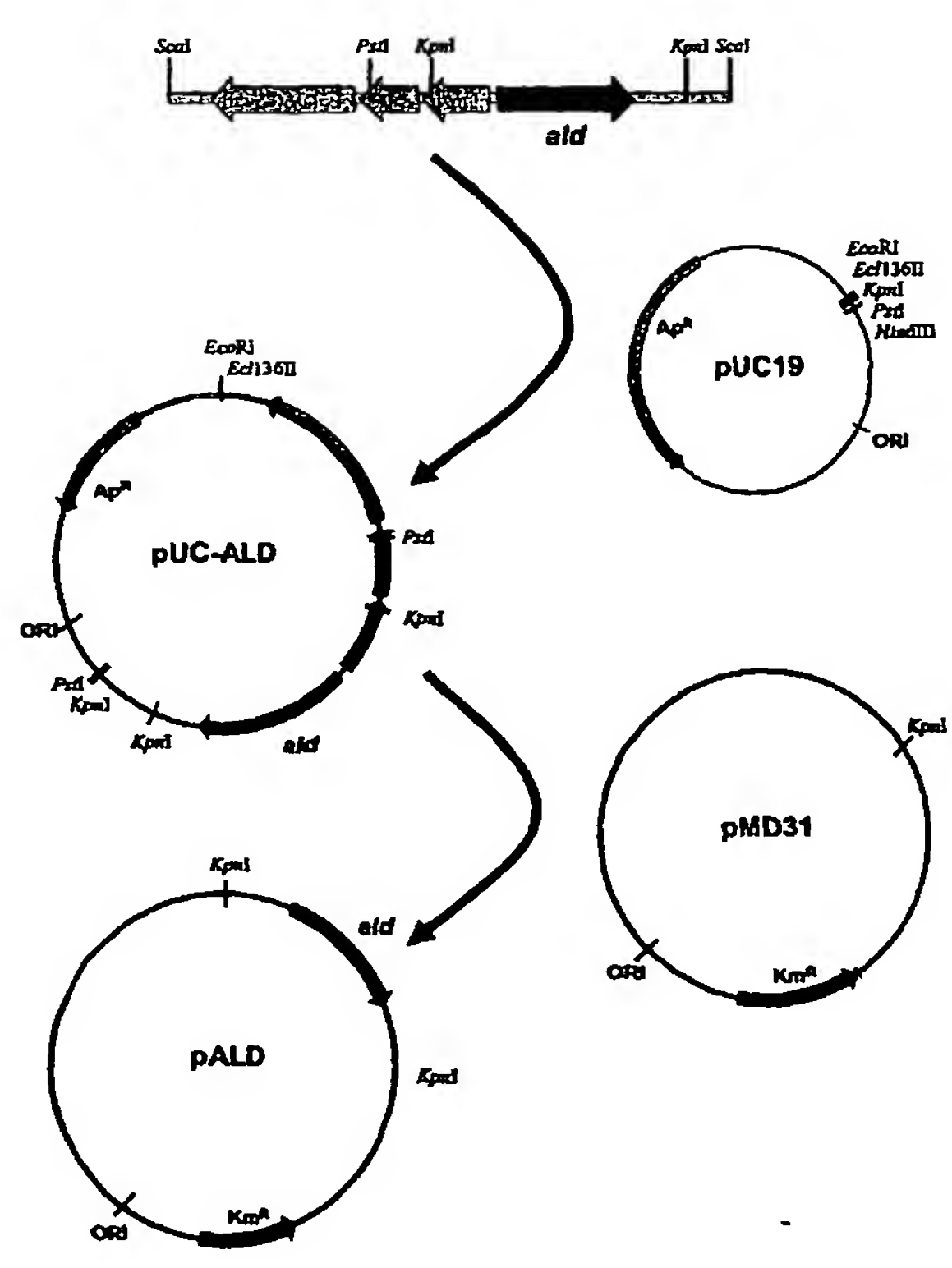
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(54) Title: TUBERCULOSIS VACCINES INCLUDING RECOMBINANT BCG STRAINS EXPRESSING ALANINE DEHYDROGENASE, SERINE DEHYDRATASE AND/OR GLUTAMINE SYNTHETASE

(57) Abstract: The invention relates to a live recombinant *Mycobacterium bovis*-BCG strain comprising a nucleic acid capable of expression, the nucleic acid encoding at least one protein or polypeptide that exhibits alanine dehydrogenase activity, glutamine synthetase activity, or serine dehydratase activity.



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